

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 30

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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***Ex parte*** STEINAR J. STRAND

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Appeal No. 96-1631  
Application 08/136,997<sup>1</sup>

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ON BRIEF

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Before and THOMAS, BARRETT and CARMICHAEL, ***Administrative Patent Judges***.

CARMICHAEL, ***Administrative Patent Judge***.

***DECISION ON APPEAL***

This is an appeal from the final rejection of Claims 1 and 3-16, which constitute all the claims remaining in the application.

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<sup>1</sup> Application for patent filed October 18, 1993. According to appellant, this application is a continuation of Application 07/817,234 filed January 6, 1992.

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Claim 1 reads as follows:

1. A magnetic head for contact with a magnetic tape, comprising:

a ferromagnetic body having a protruding rail defined by sides and having a top surface defining a maximum tape contacting surface area between the sides;

a recess in the ferromagnetic body extending beyond said sides in a tape running direction;

a ferromagnetic core having pole tips in the recess and arranged for contact with the magnetic tape at said top surface of the rail, said pole tips extending at said top surface in a tape running direction beyond body sides of the rail and up to sidewalls of said recess which are perpendicular to said tape running direction;

a non-magnetic material only along each side of the magnetic core pole tips in the recess, said non-magnetic material extending parallel to the running direction of the tape, no non-magnetic material being provided between ends of the pole tips and said side-walls of said recess which are perpendicular to the tape running direction;

relative hardnesses of the ferromagnetic body, ferromagnetic core pole tips, and non-magnetic material being chosen such that as the tape wears away on contact surfaces of the magnetic core pole tips, non-magnetic material, and ferromagnetic body, the core pole tips protrude relative to adjacent portions of the ferromagnetic body and the non-magnetic material so that the tape rides on the protruding core pole tips; and

a radius of curvature in a running direction of the tape at the tape contact surface of the core pole tips prior to wearing being smaller than a natural radius of bending of the tape, and said relative hardnesses being selected such that after approximately 1500 hours of tape wear, said radius of curvature substantially becomes said natural radius of bending of the tape.

The examiner's Answer cites the following prior art:

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Schneider et al. (Schneider)	3,983,622	Oct. 5, 1976
Mersing	4,839,959	Jun. 20, 1989
McClure	4,868,697	Sep. 19, 1989
Milo et al. (Milo)	4,949,208	Aug. 14, 1990

Claims 1, 3-5, 7-11 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Milo in view of Mersing and McClure. Claims 6 and 12-15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Milo in view of Mersing and McClure and further in view of Schneider.

#### **OPINION**

The claims all recite a magnetic head with magnetic core pole tips extending to recess sidewalls which are perpendicular to the tape running direction, no non-magnetic material being provided therebetween.

None of the references disclose such an arrangement. The primary reference, Milo, shows in Figure 3 pole tips which do not extend to the perpendicular sidewalls. Rather, non-magnetic material 67 is provided therebetween. The examiner concedes this difference and illustrates it in Appendix A of the Examiner's Answer.

Even without such a teaching in any reference, the examiner contends, the recited configuration would have been obvious as a result of "routine optimization." The examiner

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attempts to place the burden on Appellant to provide evidence of criticality. Examiner's Answer at 6-7. Appellants argue that absent a teaching of the recited feature in the references, the claims are patentable. Reply (Paper No. 20) at 2.

We agree with Appellant.

The mere fact that the prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Fritch*, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992). In the present case, the examiner has failed to establish such a suggestion and has thus failed to set forth a prima facie case of unpatentability.

The examiner has not identified any suggestion in the prior art to change the configuration shown in the top drawing of Appendix A to that shown in the bottom drawing. Such a change would require these three modifications to the configuration shown in the top drawing: (1) remove the non-magnetic material from the perpendicular sidewalls; (2) extend the pole tips to the perpendicular sidewalls; and (3) insert non-magnetic material at the parallel sidewalls. The examiner offers no reason why one skilled in the art would make any of the required modifications, let alone all of them.

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Upon our own review of the references, we find no  
suggestion to make the required modifications to Milo.

**CONCLUSION**

The rejections are not sustained.

**REVERSED**

JAMES D. THOMAS	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
LEE E. BARRETT	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	
	)	
JAMES T. CARMICHAEL	)	
Administrative Patent Judge	)	

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